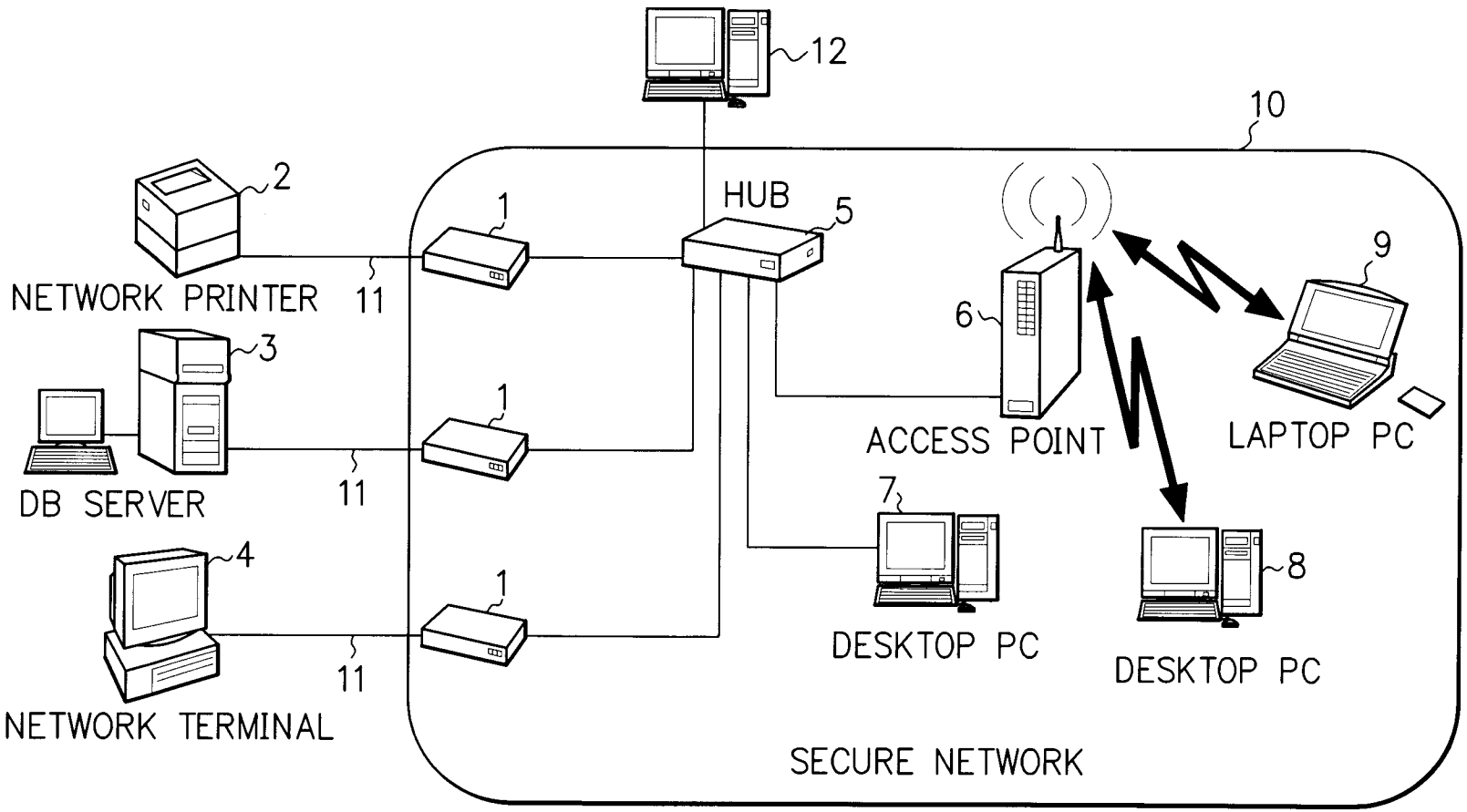
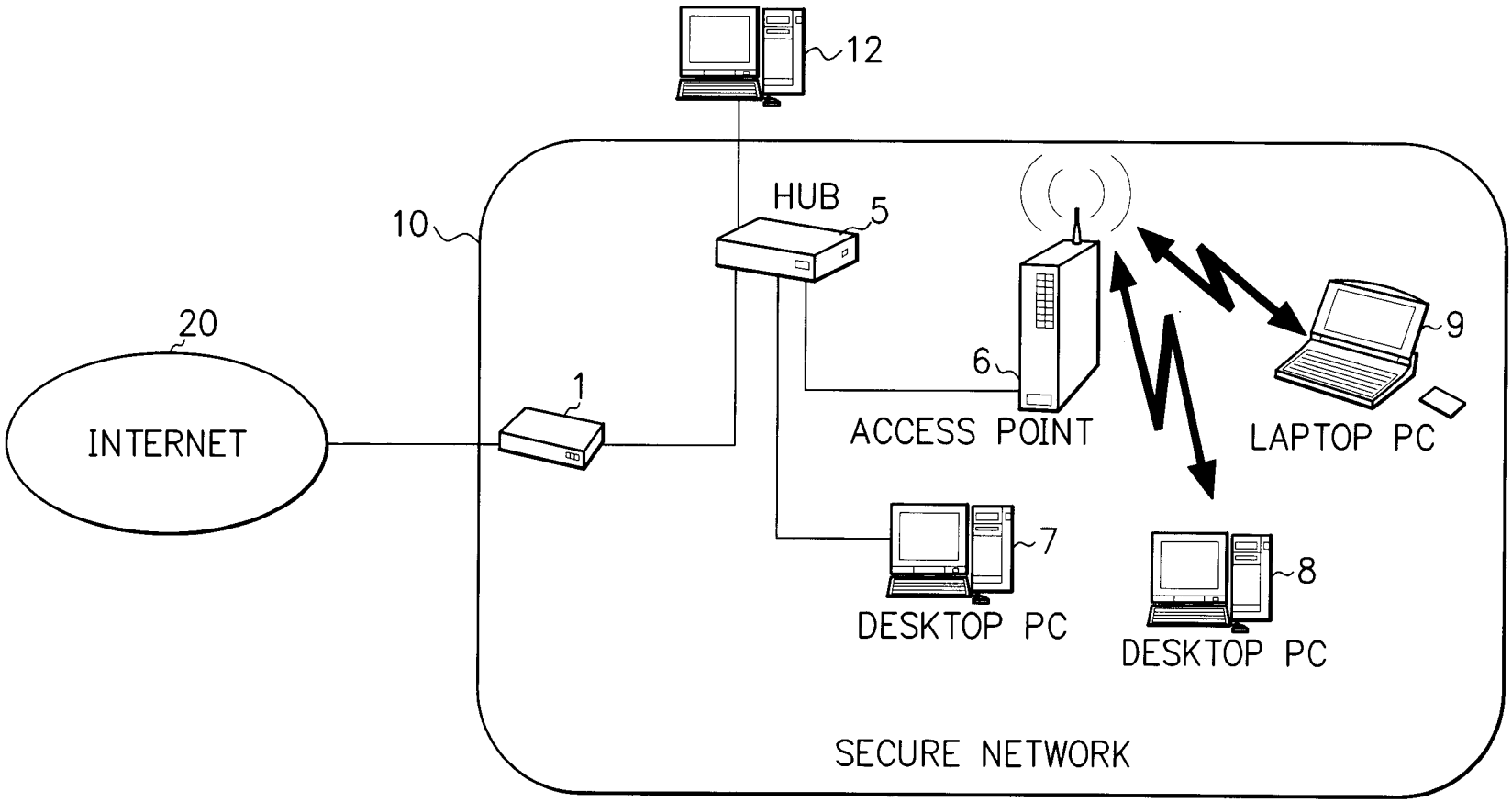
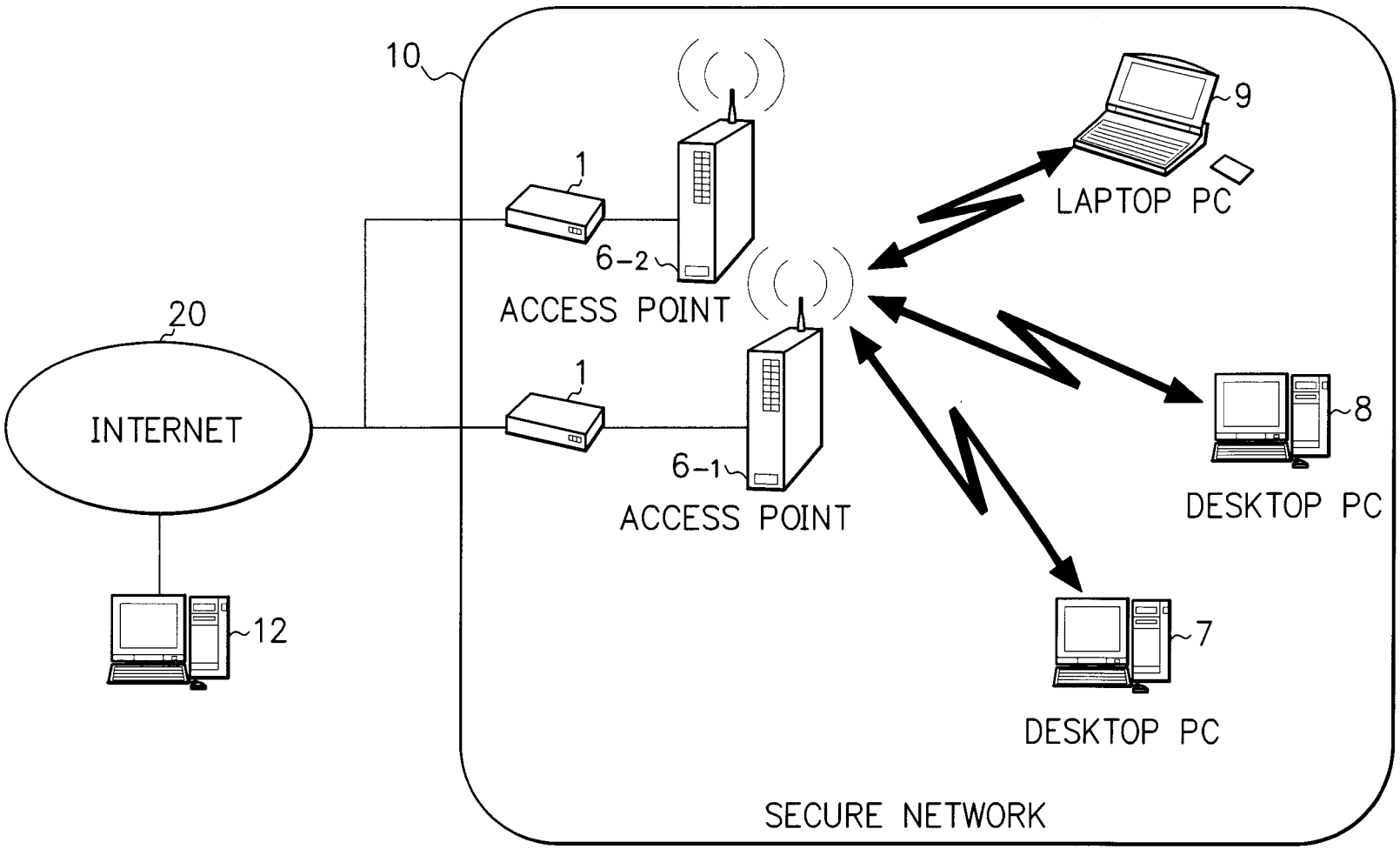
F I G. 1


12
10
2
1
HUB
5
NETWORK PRINTER
11
6
9
3
ACCESS POINT
LAPTOP PC
DB SERVER
11
7
4
8
DESKTOP PC
DESKTOP PC
11
NETWORK TERMINAL
SECURE NETWORK

F I G. 2


12
10
HUB
5
20
INTERNET
1
6
ACCESS POINT
9
LAPTOP PC
7
DESKTOP PC
8
DESKTOP PC
SECURE NETWORK

F I G. 3


10
1
6-2
ACCESS POINT
9
LAPTOP PC
20
INTERNET
1
6-1
ACCESS POINT
8
DESKTOP PC
12
7
DESKTOP PC
SECURE NETWORK

F I G. 4

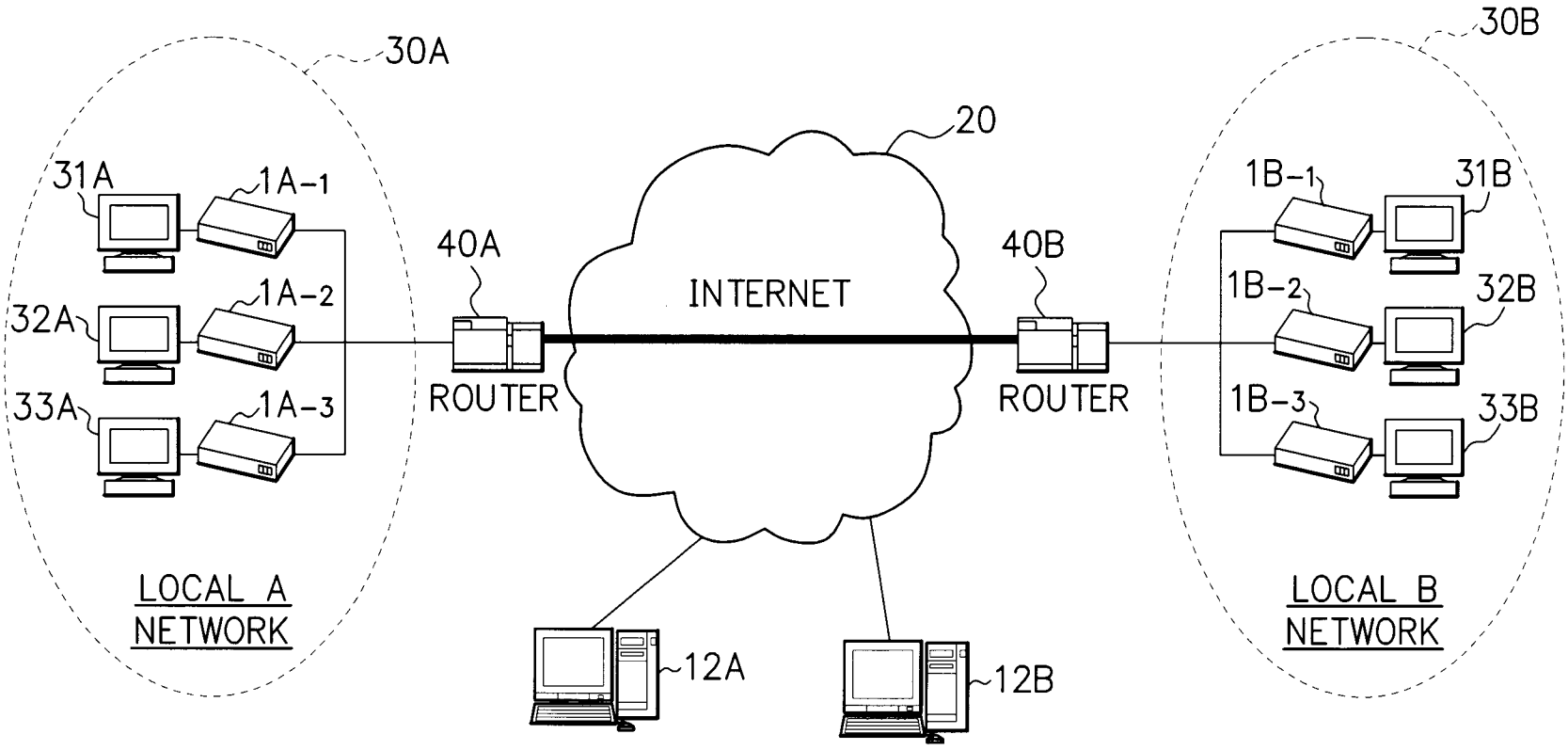

30A
30B
20
31A
1A-1
32A
1A-2
33A
1A-3
40A
ROUTER
INTERNET
40B
ROUTER
1B-1
31B
1B-2
32B
1B-3
33B
LOCAL A NETWORK
LOCAL B NETWORK
12A
12B

FIG. 5

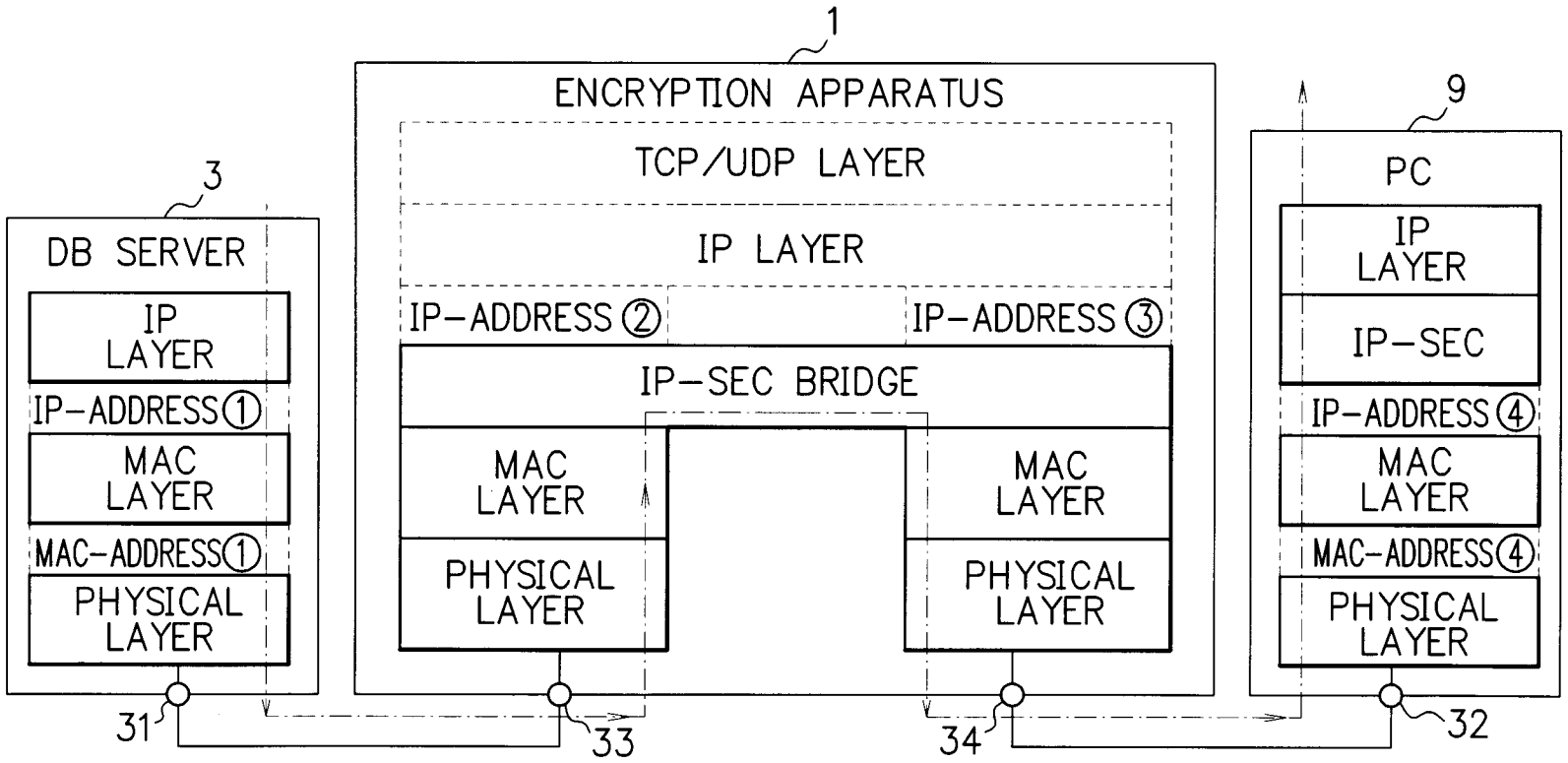

1
ENCRYPTION APPARATUS
TCP/UDP LAYER
IP LAYER
IP-ADDRESS ②
IP-ADDRESS ③
IP-SEC BRIDGE
MAC LAYER
PHYSICAL LAYER
MAC LAYER
PHYSICAL LAYER
3
DB SERVER
IP LAYER
IP-ADDRESS ①
MAC LAYER
MAC-ADDRESS ①
PHYSICAL LAYER
9
PC
IP LAYER
IP-SEC
IP-ADDRESS ④
MAC LAYER
MAC-ADDRESS ④
PHYSICAL LAYER
31
33
34
32

FIG. 6

SOURCE IP ADDRESS ①		DESTINATION IP ADDRESS ④		DATA
NETWORK ADDRESS	HOST ADDRESS	NETWORK ADDRESS	HOST ADDRESS	
NETWORK A	XXXXXX	NETWORK A	XXXXXX	

FIG. 7A

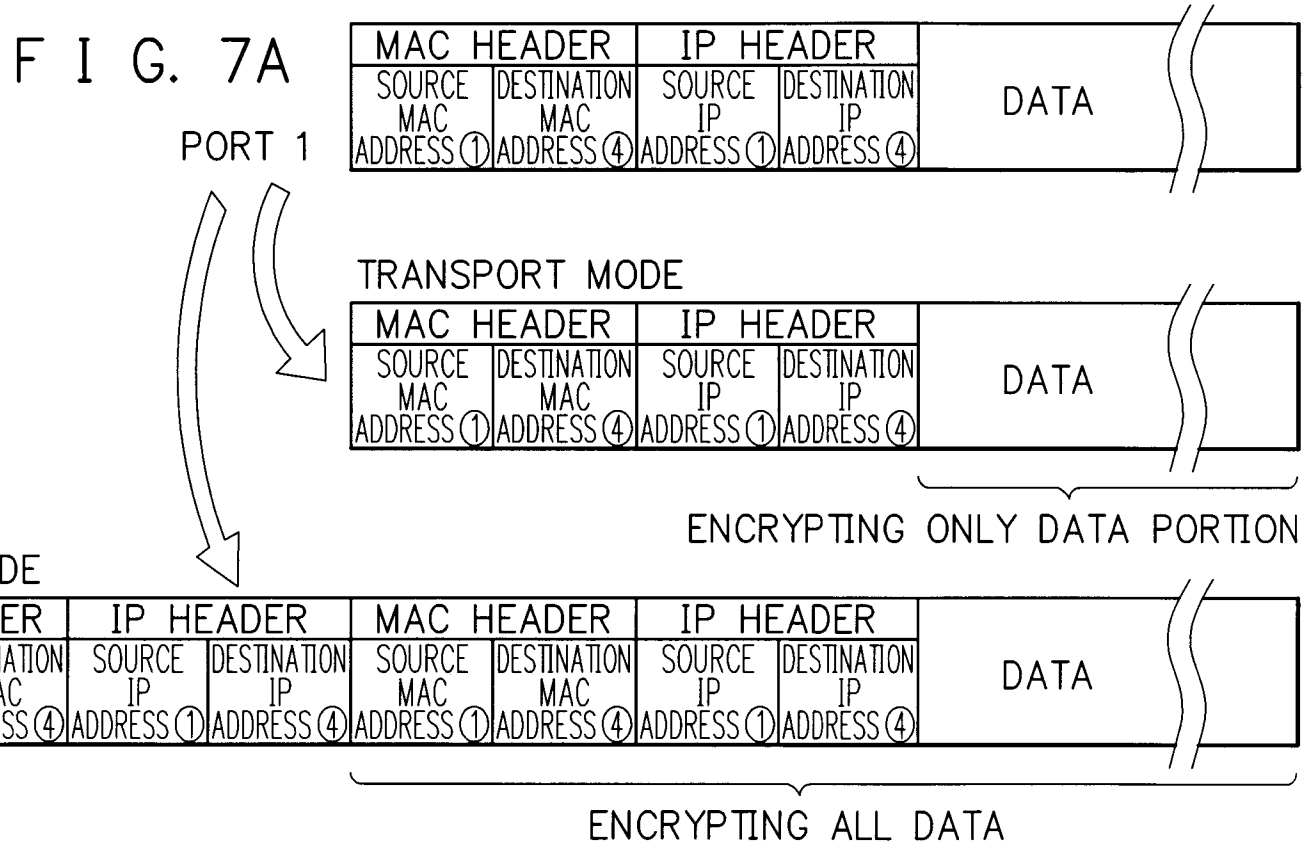

PORT 1
MAC HEADER
IP HEADER
SOURCE MAC ADDRESS ①
DESTINATION MAC ADDRESS ④
SOURCE IP ADDRESS ①
DESTINATION IP ADDRESS ④
DATA
TRANSPORT MODE
ENCRYPTING ONLY DATA PORTION
PORT 2
TUNNEL MODE
ENCRYPTING ALL DATA

FIG. 7B

FIG. 8A

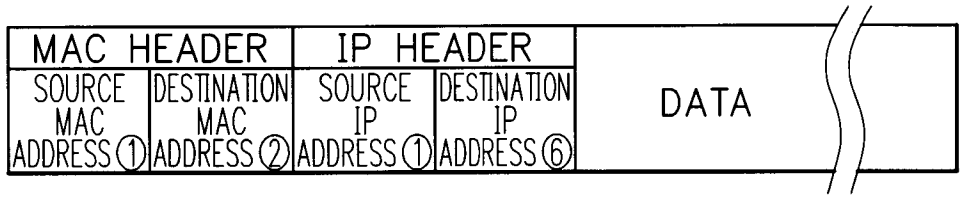
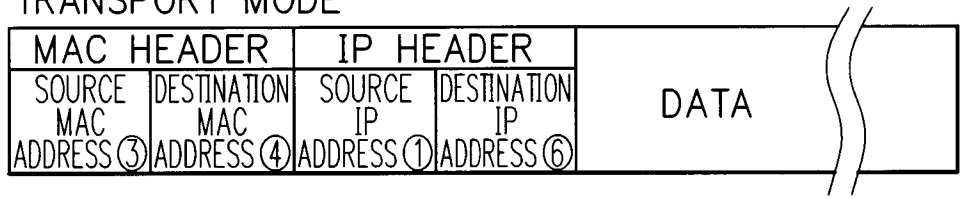


FIG. 8B

PORT 1

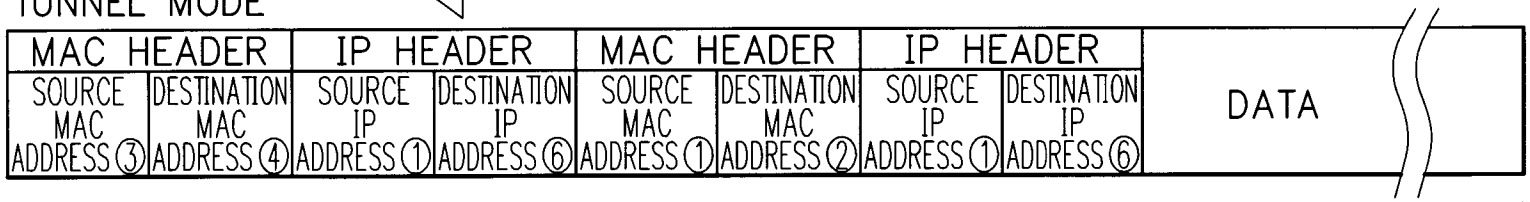
TRANSPORT MODE



ENCRYPTING ONLY DATA PORTION

PORT 2

TUNNEL MODE



ENCRYPTING ALL DATA